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RAPPORT

DE

L'INSPECTEUR MÉDICAL

ET

BACTÉRIOLOGISTE,

POUR L'ANNÉE

1929

Présenté au Comité Sanitaire le 6 Octobre 1930.

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JERSEY:
J.-T. BIGWOOD LTD., IMPRIMEURS DES ETATS,
13, BROAD STREET.

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AU COMITÉ SANITAIRE.

L'An 1930, le 6e jour d'Octobre.

LE COMITÉ a reçu les Rapports de l'Inspecteur Médical et Bactériologiste et des deux Inspecteurs Sanitaire, pour l'année 1929, avec Tableaux y relatifs.

Et le Comité a ordonné que le Rapport de l'Inspecteur Médical, seulement, sera imprimé avec les Tableaux et les Relevés y annexés, pour être ensuite distribué aux Membres des Etats.

JOHN-ED. LE HUQUET,

Commis au Greffe.

To the President and Members.

THE SANITARY COMMITTEE.

Gentlemen.

In presenting the Annual report for 1929, which includes the reports of the two Inspectors, it is hoped that the whole report will be printed.

Since an Inspector was appointed, it has been the custom to print his report.

These annual reports may not be appreciated at the time of their appearance, but they must serve as references in years to come, and for this reason alone one puts forward a plea for the printing of the whole report.

Owing to a severe winter, accompanied by an outbreak of Influenza, the deaths for the first quarter of the year exceed those of any other two quarters: viz 338 deaths registered in the first quarter and in the three succeeding quarters, the deaths registered were 167, 153 and 151 respectively.

The rise in the death rate is solely due to the climatic conditions of the first quarter, which took its toll of old people: the percentage deaths over 65 years during this quarter was 59·2.

Scarlet Fever which had increased in 1928, gave rise to 85 cases being notified in 1929. The difficulty in arresting the disease is due to several factors.

For many years we have been free from the disease, the type is, on the whole, mild and as a result many parents have not called in a doctor and children have been found to be attending School, whilst passing through an attack of the disease.

Our housing conditions, with the consequent overcrowding are responsible for the fact, that of the 85 cases notified, 53 occurred in St. Helier.

I have the honour to be,

Gentlemen,

Your obedient Servant,

P. JANVRIN MARETT, Lt.-Col.,
M.O.H. States of Jersey.

JERSEY.

Population Census	1921	49,519 inhabitants.
Estimated population	1929	50,000 inhabitants.

The figure of 50,000 has been retained for the past seven years and will be re adjusted at the 1931 census.

It has previously been pointed out that owing to migration, the result of Jersey being a health and a holiday resort, the figures for population are erroneous.

The traffic returns show 120,721 arrivals during the year, compared with 115,711 in 1928.

Jersey retains its position at the head of the list of Health Resorts, for its Sunshine record.

The following are the figures for the first four resorts :—

1.	Jersey	2084.4	hours Sunshine.
2.	Eastbourne	2081.3	,, ,,
3.	Ventnor	2068.6	,, ,,
4.	Littlehampton	2068.1	,, ,,

During the year, permission was accorded for the monthly publication of a local issue of Better Health. This paper has met with an immediate success in England and it is hoped that the same popularity has been accorded to it here. At present 1,000 copies are distributed per month and as the paper gets known, the demand for copies increases.

The work done by the District Nurses is universally recognised, the amount requires recording.

During the year 810 cases were attended and 20,178 visits paid. Of the visits, 1,162 were in connection with School inspections.

Like every energetic Association, the Federation offered its services to the Education Committee and so extended the scope of their work, which includes the supervising the cleanliness and the clothing of the school child.

The Infant Welfare Association is also "en rapport" with the Education Committee and is forwarding to the Committee the medical papers of each child on its attaining School age.

Although the school child does not come under the Public Health Committee, the work done by the Education Committee's School Medical Officer is bound to come under notice and the way in which it is being carried out, calls for congratulations to all parties concerned. One would dare to suggest that the work would correspondingly benefit if the appointment were made a whole time one, at a living wage.

RADIUM. It was decided to express our thankfulness for His Majesty's return to health, by raising a sum of money for the alleviation of sickness. At a meeting of the subscribers, it was agreed to devote the money to the purchase of Radium.

As this resolution was an expression of Public opinion there can be no hesitation in expending the money on Radium. With the Radium in the hands of Trustees, it should be held where competent surgeons can obtain it on loan for necessitous cases.

It is hardly necessary to emphasize the fact that the treatment at the General Hospital is carried out scientifically under the Medical Staff, who are under the Hospital Committee from the financial side.

Where any drug is found necessary for treatment, it is forthcoming and the same should apply to Radium, where any accessories which are required hould be obtained in exactly the same way.

In these days, there are two professions whose knowledge is being, if it have not already been usurped by the Public, these two are Religion and Medicine.

The Public delude themselves with the idea that they are as competent as men who have had a life's training.

The man who is trained, knows his limitations and should be trusted.

MILK SUPPLY.

The question of our Milk Supply is being dealt with on educational lines. Farmers are becoming dairymen and in so doing, come voluntarily under the Milk Law.

As dairymen, they find themselves out of pocket through the deterioration of milk ; as a result the economic side of the question is causing many dairy farmers to ask for assistance. To all who come for advice, it is pointed out that recommendations are made in their interests as much as that of their customers, that both are mutual interests.

The dairyman is recommended to plan the lay out of his dairy so that he can keep up to date. For a dairy to be started on the old lines simply means that the dairyman would in a short time, come back to say that a rival had put in some plant which he had not got and for which he had not made any allowance, and that he was already a back number. Giving this explanation results in allowing space in the plans for improvements, which can be made as circumstances permit.

The recommendations are made with a view to the provision of a wholesome food, which when achieved will procure a ready sale. That a clean milk supply is to be hoped for eventually is not lost sight of.

The plans which are being given allow for the filtration of milk to remove gross impurities, pasteurisation by the "holding" process, after pasteurisation, the milk is cooled and bottled and immediately placed in a cold chamber.

In order to carry this out, it is necessary to have apparatus for washing all utensils used and after washing to carry out sterilisation by steam.

In order to do this work efficiently, the plans are so arranged that there should be no to and fro movement.

Cans on arrival at the dairy, are emptied into the filters and are then washed, sterilised and made ready for issue ; the milk passes on in the opposite direction, to the pasteuriser-cooler and bottler and finally into the cold chamber.

Where a dairyman is willing to put in the whole apparatus, the method of working it is not only explained, but the process is watched throughout. On completion any modifications necessary are explained and samples of milk are taken : (1) of the raw milk (2) milk after filteration (3) after pasteurisation (4) after cooling and just when about to be bottled.

Where organisms are recovered, according to what they are, recommendations are made to consult a veterinary surgeon or to exercise more care in handling.

Milk kept in suitable bottles, after the above treatment, will remain fresh and sweet for a considerable time, especially when kept in the cold chamber.

A considerable amount of work was done on the Methylene Blue and the Formol-Methylene Blue tests for the cleanliness of milk ; comparing results with culture methods they were not considered satisfactory.

FOODSTUFFS.

The usual work has been carried out as regards the supervision of foodstuffs.

One case of addition of Boric compounds to milk and one case of adulteration of milk with 36% water were discovered. A certain quantity of perishable foodstuffs have had to be condemned but it is surprising that the loss is not greater, considering that the bulk of our food is imported.

WATER SUPPLIES.

The number of samples of water examined was 95, a rise on last year, due partly to the increase in the number of cases of Infectious Diseases and partly to the examination of waters for the presence of Lead.

The Waterworks Company's supply has been satisfactory and there has been no shortage of water.

The question of the purchase of the Waterworks Company by the States was not approved.

The Company in view of the extensions of its services have every year felt some misgivings as to the storage capacity of its reservoirs, with this in view the Company has purchased the Old China Quarries and are building a dam across the Valley, the new reservoir thus formed should double the storage capacity.

At some time, it will be necessary to consider a scheme for the supply of piped water to the whole Island, which will necessitate the conservation of the water of the twelve streams which at present run to waste over the cliffs on the north coast. At present, of the five streams which flow south, the water of one only is conserved, whilst the streams flowing out on the east coast are also allowed to be grossly polluted and to run to waste. Legislation is very necessary to protect our streams.

The question of a shortage of water is as serious for the country parishes as it is for the Town, if not more serious ; one of the first necessities in Agriculture is an available water supply.

DRAINAGE, SEWERAGE AND SEWAGE DISPOSAL.

In last year's report it was hoped that the three sections of drainage, the First Tower, the St. Clement's and the Five Oaks Schemes would be completed during the year, it is regretted that the first section has not yet been completed.

DISPOSAL OF REFUSE.

There has been no improvement under this heading. The question is urgent as refuse dumps are not only a distinct nuisance but a menace to health. At present each parish is responsible for the disposal of its refuse but as the question is becoming one of considerable importance, it is suggested that the States enquire into the whole question and put the responsibility for the removal and disposal of refuse under one authority.

HOUSING ACCOMMODATION.

Only desultory building has been undertaken during the year. A Housing Scheme is an urgent necessity and yet neither those whom it intimately concerns nor any other section of the people seems to be interested in the provision of decent accommodation at a suitable rental.

The Clos du Paradis Scheme or any scheme which does not require the expenditure of money on the purchase of land, is undoubtedly the cheaper, but these houses would have to be built on " Clos des Pauvres " which fortunately exist in every parish. Workmen's dwellings built on parish property would also be less costly on account of the greater facility of dealing with water supply, drainage and lighting. It must be emphasised that houses built on such lands could not be purchased outright. For those who would wish to purchase their homes, the formation of a local building society should not be impossible.

VITAL STATISTICS FOR 1929.

The figures issued by the Ministry of Health for 1929, for purposes of comparison of Vital Statistics are as follows :—

Area.	Birth Rate.	Death Rate.	Infant Mortality.
England and Wales...	16.3	13.4	74
107 County Boroughs and great Towns including London...	16.7	13.8	79.
157 smaller Towns ...	16.0	12.3	69.
London	15.9	13.9	70.
Jersey	14.54	16.2	74.27

Climatic conditions were responsible for the increased death rate. This occurred during the months of February and March and was accompanied by Influenza.

During these two months, 31 deaths were registered as due to Influenza. The following table shows the rise in deaths from Respiratory Diseases, Heart Diseases, Old Age, Influenza and Tubercle of Lung.

Quarter.	Respiratory.	Heart.	Old Age.	Influenza.	T.B. Lungs.
1st	84	57	41	31	21
2nd	25	17	24	—	8
3rd	11	28	11	—	11
4th	20	33	10	—	7

ZYMOTIC DISEASES.

The following are the Zymotic Deaths registered during the year.

Measles	2
Whooping Cough	—
Diphtheria	1
Enteric Fever Group	1
Diarrhœa	14
Scarlet Fever	2
Chicken Pox	1
Total	21

giving a Zymotic death rate of .42 per 1000 inhabitants.

This rate is considerably higher than it has been during the last few years.

NOTIFIABLE DISEASES.

One hundred and twenty-two cases were notified, of these 67 occurred in the Parish of St. Helier and 55 in the country parishes: the ratios being respectively 2·48 and 2·39 per 1000.

Scarlet Fever: 85 cases were notified and 2 deaths occurred, both cases were in children debilitated by other diseases. Last year the number notified was 38.

The difficulty in controlling the disease is due to many reasons, chief among these being the mildness of the type resulting in children continuing to attend school. Another reason is the delay in calling in the family doctor and in a few cases a delay in notifying.

Diphtheria: 9 cases were dealt with, of which 2 were carriers. All the cases occurred in connection with Trinity Parish School, with the exception of a farmer living in the same Parish. Four of the cases were in one family and two of these were carriers.

No further cases occurred after these two were removed to Hospital: one was a nasal and the other a tonsillar carrier.

Enteric Fever Group: One case was reported and resulted in death.

Tuberculosis: Of the 55 deaths registered, 47 were due to T.B. lungs and 8 due to other forms viz: 2 due to Meningitis, 2 to Peritonitis and one each to Laryngitis, Salpingitis, Kidney and Enteritis.

The 47 deaths registered as T.B. Lungs can be divided into the following three groups:—

1. 26 deaths were only reported at death.
2. 11 deaths occurred among 72 who were given treatment.
3. 10 deaths occurred among 21 who were not given treatment.

LABORATORY.

Table V gives details of the work carried out in the laboratory. Of the 2444 specimens examined, 1,716 were specimens of sputum. Besides 24 specimens of milk for official examination, samples of milk were brought in from cattle suffering from Mastitis, with a view to obtaining strains of Monilia for Vaccine treatment of cattle.

At the present time, the suggested treatment of cattle is for prophylactic vaccine treatment within six months of birth and again 10–14 days before calving, to be accompanied by the exhibition of Potassium Iodide.

Vaccine treatment has been found to be of use both as a prophylactic and also in acute mastitis.

During the year, work on the differential diagnosis of Chronic Lung infections has been continued.

The following table shows the relative incidence of Chronic Lung infections for the past three years:

	1927.	1928.	1929.
Total number of cases examined	295	304	376
Number due to T.B. and Blastomycete	50 } 80	66 } 82	93 } 93
Number due to T.B. only	30	16	—
Number due to Blastomycete	120	160	189
Number due to other organisms	95	62	94

These facts are emphasised :—

1. In three out of every four cases of Chronic lung infection the sputum contained Monilia.
2. This year, in every case of T.B. infection, Monilias were also present in the sputum.

The result of publishing papers on this subject has given rise to a good deal of correspondance and to the receipt of papers on Monilia infections.

Some maintain that Monilias are harmless yeasts, struggling for existence in unhappy circumstances. Many agree that when no other organism in particular is present, Monilia infection may be diagnosed, but as soon as T.B. accompanies Monilia, the latter becomes a mere contamination, yet we know that Diphtheria may be a serious complication of Scarlet Fever and Typhoid of Malaria and that the recognition of these is the key to treatment.

The presence of Monilias in pleural effusions, as the sole organism present, raises the question as to whence the so called contamination.

The Hygienist admits that Thrush, which is due to Monilia, occurs in bottle-fed children. Examination of milk, supplied to Monilia sufferers, has proved the frequent presence of Monilia, not only in the milk supply but also in the milk of individual cows, which have been found suffering from Mastitis and from warts on the teats.

Emphasis is laid on the frequency of Monilial Broncho-pneumonia as a sequel to Measles and to Whooping Cough. It is suggested that debilitated children fed on infected milk are more liable to infection.

The question of Pathogenicity of Monilias is one that requires to be dealt with clinically, bacteriologically and bio-chemically.

Clinically. Monilias are found in sputum in three types of cases :—

(*a*) Broncho-pneumonias following acute infection.

(*b*) Chronic Bronchitis, localised or diffuse.

(*c*) Asthma.

The great majority of the first are Monilia infections which are cured by treatment, a few show T.B. superadded.

In the second are still many Monilia infections but in a considerable number, T.B. has gained a footing.

In the third, cases are invariably negative to T.B. and often show heavy Monilia infection.

BACTERIOLOGY. Apart from morphological and cultural difference, Monilias grown in beer wort for 48 hours, can, for the sake of convenience, be classified into two big groups :—

(*a*) those which give rise to evident exo-toxins (if Co_2 and Acidity may be refered to as such) and (*b*) those which give rise to endo-toxins.

(*a*) Under the first ; some cultures give rise to excessive gas formation, which is seen, on the introduction of a warm platinum loop, when brisk effervescence of Co_2 occurs ; these strains also give rise to Lactic Acid.

(*b*) On staining with Methylene Blue, certain cultures show a greater granule content, these granules give a chromatic stain. On staining with Carbol Fuchsin, many granules are seen to be acid fast. This would appear to indicate that some Monilias contain a chemical substance which is similar to the acid fast substance in Tubercle.

Based on an analogy with the Diphtheria bacillus, where strains with a maximum granule content, are used in the preparation of Antitoxin ; in Monilia the granules of either variety may be taken to indicate increased toxicity.

Those Monilias associated with exo-toxins are found in Asthma and in Granulomatous conditions.

With reference to endo-toxins, clinical cases show greater severity of symptoms, pari passu with granule content ; the greater the acid fast content the more severe the symptoms. When the foregoing is compared with work done by Bio-chemists, on yeasts, it is remarkable how the above simple methods are of assistance.

1. The Bio-chemist has shewn that an excess of Co_2 in the lungs gives rise to the condition known as " compensated alkali or " Co_2 excess, which is associated with Asthma."
2. The formation of Lactic Acid is now recognised as a causal agent of cell proliferation.
3. Bio-chemists have shewn that vegetable nucleic acids act as poisons to animals. On injecting yeasts into the blood, there is excessive tissue destruction, with greatly increased excretion of Nitrogen and phosphates. The same thing happens in a case

of Tuberculosis, but wasting is more marked in the combined infection (T.B. and Monilia) than in the rare case of pure T.B. infection.

The greater the granule content, the greater the amount of vegetable nucleic acids and the greater the pathogenicity.

P. JANVRIN MARETT, Lt.-Col.,
M.O.H. and Bacteriologist,
States of Jersey.

TABLE I.
VITAL STATISTICS OF THE ISLAND OF JERSEY FOR THE YEAR 1929.

Estimated Population.	Births.		Deaths.		Death Rate for		Deaths under one year.		Marriages.	
	Number	Rate	Number	Rate	T.B.	Cancer	Number	Rate for 1,000 Births	Number	Rate
50,000	727	14.54	809	16.18	Lungs ...... .94 All forms ... 1.1	1.64	53	72.9	319	6.38

TABLE II.
PERCENTAGES OF DEATHS AT DIFFERENT AGE GROUPS, 1929.

	All ages	Under 1 year	1—5	5—15	15—25	25—45	45—65	65—70	70—80	80—90	90-100up	Total 65 up
Total deaths	809	53	12	12	34	69	194	77	203	129	26	435
Rate per cent. ...	99.984	6.551	1.483	1.483	4.202	8.529	23.980	9.518	25.092	15.933	3.213	53.765

TABLE III.

TABLE OF INFECTIOUS DISEASES NOTIFIED DURING 1929.

	Number of Cases notified at ages in years.								Total cases notified in each Parish.											
	At all Ages.	under 1	1-5	5-15	15-25	25-45	45-65	65 & up.	St. Helier	St. Mary	St. Martin	St. Lawrence	St. John	Grouville	St. Peter	St. Ouen	St. Saviour	St, Brelade	St. Clement	Trinity
Diphtheria	7	—	—	6	—	1	—	—	1	—	—	—	1	—	—	—	1	—	—	4
Diphtheria Carrier ...	2	—	1	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—
Scarlet Fever	85	—	4	64	7	9	1	—	53	1	—	2	1	9	6	6	5	2	—	—
T.B. Lungs	23	—	—	—	11	10	2	—	9	—	—	—	1	4	1	4	2	—	1	1
T.B. Peritonitis	1	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Typhoid Group	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Pneumonia	2	—	—	—	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	1	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Totals	122	—	5	71	20	23	3	—	67	1	—	2	5	13	7	10	9	2	1	5

With the exception of a farmer residing in Trinity, all the cases were in connection with Trinity School. One of the Diphtheria Carriers was a nasal, the other a tonsillar carrier.

TABLE IV.

CAUSES OF AND AGES AT DEATH DURING THE YEAR, 1929.—ISLAND OF JERSEY.

DISEASES.	All ages	Under 1	1—2	2—5	5—15	15—25	25—45	45—65	65—70	70—80	80—90	90—100
Typhoid Group	1	—	—	—	—	—	1	—	—	—	—	—
Measles	2	—	1	1	—	—	—	—	—	—	—	—
Scarlet Fever	2	—	—	—	2	—	—	—	—	—	—	—
Diptheria	1	—	—	—	1	—	—	—	—	—	—	—
Chicken Pox	1	1	—	—	—	—	—	—	—	—	—	—
Syphilis. Congenital	1	1	—	—	—	—	—	—	—	—	—	—
Influenza	31	—	—	—	1	2	1	10	6	5	6	—
Puerperal Conditions	4	—	—	—	—	3	1	—	—	—	—	—
Diarrhoea and Enteritis	14	8	1	—	2	—	—	2	—	1	—	—
T.B. Lungs	47	—	—	—	—	16	19	9	1	2	—	—
Tuberculous Meningitis	2	—	—	—	1	1	—	—	—	—	—	—
Other T.B.	6	—	—	1	—	1	3	1	—	—	—	—
Malignant Diseases	82	—	—	—	—	—	7	31	12	27	5	—
Diseases of Blood	1	—	—	—	—	—	—	1	—	—	—	—
Diabetes	6	—	—	—	—	1	2	1	1	1	—	—
Bronchitis	62	—	—	—	—	—	1	12	2	25	18	4
Broncho-Pneumonia	19	6	—	1	—	—	—	4	5	2	1	—
Pneumonia	61	3	2	—	—	1	10	11	7	18	7	2
Other Respiratory	1	—	—	—	—	—	—	1	—	—	—	—
Cerebral Hoemorrhage	81	—	—	—	—	—	—	20	15	32	13	1
Heart Diseases	119	—	—	1	1	2	5	38	15	41	16	—
Arteria-Selerosis	17	—	—	—	—	—	—	3	2	10	2	—
Appendicitis	3	—	—	1	—	—	1	1	—	—	—	—
Other Intestinal Diseases	15	—	—	—	—	1	2	8	2	—	2	—
Alcoholism and Cirrhosis	3	—	—	—	—	—	—	1	1	1	—	—
Nephritis	30	—	—	—	—	1	5	7	3	10	4	—
Congenital Malformations, etc.	27	27	—	—	—	—	—	—	—	—	—	—
Violent Deaths ex Suicide	17	—	—	—	1	4	3	5	1	2	1	—
Suicides	10	—	—	—	—	—	2	7	1	—	—	—
Other Defined Diseases	135	4	1	2	3	1	6	19	2	24	54	19
Ill Defined Diseases	8	3	—	—	—	—	—	2	1	2	—	—
	809	53	5	7	12	34	69	194	77	203	129	26

TABLE V.
BACTERIOLOGICAL TABLE.

NATURE OF SPECIMEN.	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Totals
Sputum Negative	150	178	109	142	579
Sputum T.B.	260	178	170	123	731
Sputum Blasto	62	77	75	82	296
Sputum Mixed	15	44	24	27	110
Urine Chemical	27	43	24	17	111
Urine Bacteriological	30	41	37	29	137
Swabs Throat	37	68	20	44	169
Swabs Nasal	9	18	2	6	35
Pus Smears	6	5	14	15	40
Foeces Bacteriological	12	14	14	8	48
Foeces Parasites	1	—	—	—	1
Blood counts	3	1	—	2	6
Blood smears differential	4	—	—	4	8
Blood Widal	—	1	3	—	4
Blood films parasites	—	2	2	—	4
Blood culture	—	1	1	—	2
Milk	5	15	4	—	24
Water	19	36	19	21	95
C.S.F.	1	4	1	2	8
Vaccines	2	3	1	—	6
Miscellaneous	5	10	8	7	30
	648	739	528	529	2,444

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